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Bakaltcheva et al.(10) **Pub. No.: US 2010/0273141 A1**(43) **Pub. Date: Oct. 28, 2010**(54) **GLYCINE STABILIZED LYOPHILIZED
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(57)

ABSTRACT

The invention is directed to stabilized whole-cell plasma, which retains the integrity and overall stability of the proteins and other macromolecules of the plasma. Stabilization is accomplished by the addition of glycine to plasma which allows for stabilization prior to freeze drying. Glycine, in the presence of the salt concentration in the plasma, does not recrystallize and acts as a superior stabilizer for the lyophilized plasma. The stability of the freeze dried plasma may be further improved by addition of protectants including calcium chloride, trisodium citrate, hydroxyethyl starch, ammonium sulfate and citric acid to maintain physiologic pH. Superior stability for a wide variety of plasma proteins and functions is shown. A system for the large scale preparation of sterile lyophilized plasma is also provided.